

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-148294

(43)Date of publication of application : 21.05.2003

(51)Int.Cl.

F02M 59/44
C23C 28/04
F02M 37/06
F02M 59/04
F02M 59/10
F04B 9/04
F04B 53/00
// C22C 38/00

(21)Application number : 2001-345505

(71)Applicant : HITACHI LTD

(22)Date of filing : 12.11.2001

(72)Inventor : YAMAGUCHI SHIZUKA

BABA NOBORU

NARISAWA TOSHIAKI

TERAKADO KAZUYOSHI

KAGIYAMA ARATA

MACHIMURA HIDENORI

YAMADA HIROYUKI

TAKAHASHI YUKIO

KOTAKI MICHIOYOSHI

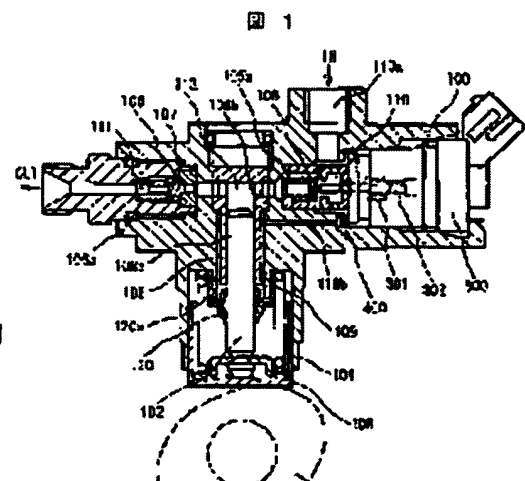
KOJIMA KAZUO

(54) FUEL PUMP AND CYLINDER INJECTION ENGINE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a fuel pump having a sliding mechanism part inside a fuel chamber with excellent abrasion resistance under a hard environment, and to provide a cylinder injection engine using the same.

SOLUTION: In this fuel pump for pressurizing fuel and feeding it to a fuel injection valve of an automobile engine, at least a one-side sliding surface of each sliding member such as a cam plate, a slipper and a plunger slid in lubricating oil and a plunger and a cylinder slid in



the fuel brought in contact with each other and slid through the fuel is formed with a hardening layer formed of one of a nitride layer, a carburizing and quenching layer and carbonitriding layer, or formed with a hard metal compound layer having high corrosion resistance in relation to the hardening layer.

LEGAL STATUS

[Date of request for examination] 28.04.2004

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]